

## If You Need a Medicine You Should Have the Best

Have you ever stopped to reason why it is that so many products that are extensively advertised, all at once drop out of sight and are soon forgotten? The reason is plain—the article did not fulfill the promises of the manufacturer. This applies more particularly to a medicine. A medicine's preparation that has real curative value almost sells itself, as like an endless chain system the remedy is recommended by those who have been benefited, to those who are in need of it. A prominent druggist says "Take for example Dr. Kilmer's Swamp-Root, a preparation I have sold for many years and never hesitate to recommend, for in almost every case it shows excellent results, as many of my customers testify. No other kidney remedy has so large a sale."

According to sworn statements and verified testimony of thousands who have used the preparation, the success of Dr. Kilmer's Swamp-Root is due to the fact, so many people claim, that it fulfills almost every wish in overcoming kidney, liver and bladder ailments; corrects urinary troubles and neutralizes the uric acid which causes rheumatism.

You may receive a sample bottle of Swamp-Root by Parcel Post. Address Dr. Kilmer & Co., Binghamton, N. Y., and enclose ten cents; also mention this paper. Large and medium size bottles for sale at all drug stores. Advertisement.

Almost Nothing at All. Voice (over the telephone)—What's going on tonight, Biffkins? Biffkins—Very little. My wife's dressing for the ball.—Wayside Tales.

## MOTHER, QUICK! GIVE CALIFORNIA FIG SYRUP FOR CHILD'S BOWELS

Even a sick child loves the "fruity" taste of "California Fig Syrup." If the little tongue is coated, or if your child is listless, cross, feverish, full of cold, or has colic, a teaspoonful will never fail to open the bowels. In a few hours you can see for yourself how thoroughly it works all the constipation poison, sour bile and waste from the tender, little bowels and gives you a well, playful child again.

Millions of mothers keep "California Fig Syrup" handy. They know a teaspoonful today saves a sick child tomorrow. Ask your druggist for genuine "California Fig Syrup" which has directions for babies and children of all ages printed on bottle. Mother! You must say "California" or you may get an imitation fig syrup.—Advertisement.

Football made safer might also be made more comprehensible to untrained spectators.

## ASPIRIN INTRODUCED BY "BAYER" IN 1900

Look for Name "Bayer" on the Tablets, Then You Need Never Worry.

If you want the true, world-famous Aspirin, as prescribed by physicians for over twenty-one years, you must ask for "Bayer Tablets of Aspirin."

The name "Bayer" is stamped on each tablet and appears on each package for your protection against imitations.—Advertisement.

If the writer's prejudices agree with ours, then his book fills our "long-felt want."

## Are You Weak, Nervous? This Advice is Vital to You.

Kirkville, Mo.—"I had a severe case of the La grippe and did not get along well afterward; it left me weak and a nervous wreck, could not do anything. I went on this way for some time, just could not get back my health. I took many medicines but without results. At last I began taking 'Favorite Prescription' and it soon built me up and gave me strength and I felt like a different person. Women who want a good medicine will find it in Dr. Pierce's Favorite Prescription."—Mrs. A. Shain, 402 W. Illinois St.

Write Dr. Pierce, President Invalids' Hotel in Buffalo, N. Y., for free consultation medical advice.

**You'll Smile Too**  
When you know the Comfort and Easy Stretch

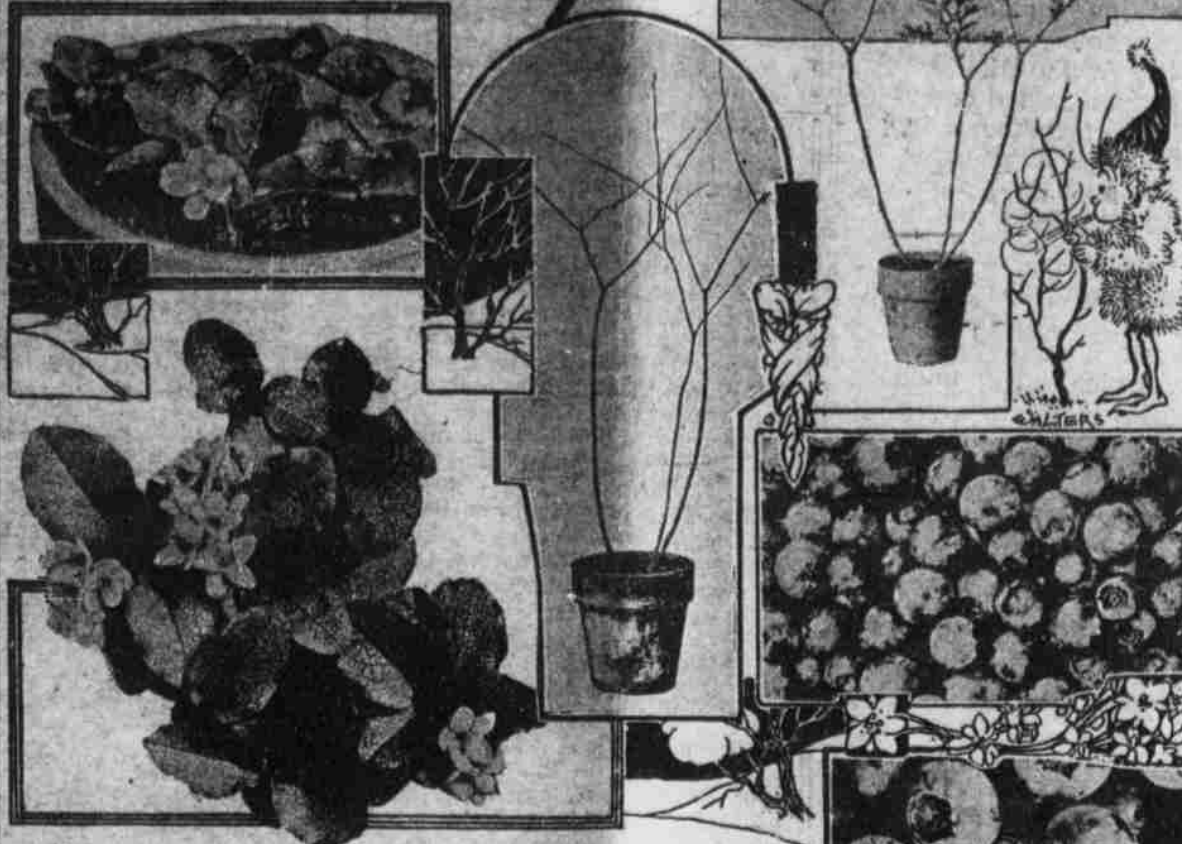
**EXCELLO**  
SUSPENSORS

Ask Your Dealer if he has EXCELLO and if not, write to the EXCELLO Co., 100 N. 3rd St., St. Paul, Minn.

## Cuticura Soap The Velvet Touch For the Skin

Soap 25c, Ointment 25c and 50c, Tablets 25c.

# Jack Frost and Plant Life



By ROBERT H. MOULTON

THE scientists are upsetting many of our popular notions nowadays. The latest theory they have disproved has to do with the effect of cold upon plant life in our northern states. While we have always believed that Jack Frost was the arch enemy of plant life, and that if it were not for him we would have flowers and fruits and grass perhaps all the year round, the scientists now tell us that Jack is in the main a beneficent old fellow.

They admit that if he comes too early or stays too late, his visit is likely to prove embarrassing. Yet if he did not come at all, which means if we did not have any cold weather, the majority of plants in our northern latitudes would show slow growth in the spring. It is hard to believe that the effect of cold is to stimulate rather than retard plant growth, but that is what we are now informed actually happens. Experts of the Department of Agriculture are responsible for this revolutionary theory. They back up the theory with the results of numerous experiments, however, and results are what count.

One fact stands clear in these experiments—the dormant condition of certain plants in winter is not the result of cold and freezing; moreover, cold stimulates the revival of life in the plant when spring comes. Such an explanation of the effect of cold is new to the everyday reader, who is used to looking upon winter air as detrimental to plant life, forcing the shrub into a dormant state scarcely better than death. But healthy, husky blueberries which were in a government greenhouse "went to sleep" just the same, despite the fact that the air was kept at a growing temperature.

The shrubs, it is true, did not go to bed so early as they did when Jack Frost used to hurry them off, and in the warm greenhouse the plants went into a dormant condition exactly like that of others outside in the cold and snow. Moreover, they were late in waking when spring came. Some, indeed, slept through the whole year. The inference is that the plant's period of dormancy is a seasonal matter not induced by the cold, but that the early and luxuriant growth cannot occur unless the plant has been through a period of chill temperature.

Two interesting experiments were conducted with blueberry plants as proof of this. In the middle of February a blueberry plant which had shed its leaves and become dormant in a warm greenhouse maintained at a temperature of 70 degrees was repotted and set in the south end of the greenhouse. A small opening was made in the glass, and through this opening one of the two stems of the plant was thrust, the open space about the stem where it passed through the glass being carefully plugged. During the rest of the winter the plant remained in the same position, the pot and one stem continuing in the warm temperature of the greenhouse, while the other stem, projecting through the glass, was exposed to the rigors of winter, with its alternate freezing and thawing. About the middle of April the out-door branch started into normal growth, while the indoor branch continued dormant.

A modification of this experiment was conducted at the same time with another plant. In this case the plant

was set on a shelf outside the greenhouse and a single branch run through the glass into the warm interior. When spring came it was the interior branch that remained dormant, all the outside branches putting out leaves promptly. Thus the two experiments served to check each other.

From a comparison of these two experiments it is evident that the difference in behavior of the indoor and outdoor branches could not have been caused by any special action of the root system, for in one experiment the roots were inside, and in the other, out. It is clear that the causes that stimulated growth in the exposed stems operated in the stem itself, not in the roots. The theory is that the cold weakens the plant cells, and by destruction in part turns the starch to sugar, thus assuring new growth. This event, it is asserted, cannot take place if the plants are protected from frost and cellular injury.

A little consideration will show how important the principle of chilling is to those species of trees and shrubs which are subjected each year to several months of freezing weather. If they are so constituted as to start into growth as easily in the warm days of late fall as they do in the warm days of early spring, many species would come into flowers and leaf in those warm autumn spells that we call Indian summer, and the stored food that the plant required for its normal vigorous growth in the following spring would be wasted in a burst of new autumn growth, which would be killed by the first heavy frozes and would be followed by a winter of weakness and probable death.

But when two or three months of chilling are necessary before a newly dormant plant will respond to the usual effect of warmth, such plants are protected against the dangers of growth in Indian summer. It is probable that all our native trees and shrubs are thus protected.

Anyone may make a simple and instructive experiment in the fall and winter with such early spring bloomers as alder, hazelnut, pussy willow, yellow bush jasmine, forsythia, Japanese quince, peach and plum. In mid-autumn bring into your living room and set in water freshly cut, dormant, leafless branches of these plants. They will not bloom. At intervals of a few weeks during the late autumn and winter try the same experiment again. It will be found that the branches cut at later dates will come into bloom under this treatment. They will not do so, however, until the expiration of the period chilling appropriate to the various kinds of plants included in the experiment.

It might be argued that in the tropics there is no chilling weather, yet that trees and shrubs spring into growth after the dormant period of the dry season just as they do in temperate climes after the dormant period of winter. The critical scientific man will therefore ask, "Are there not other agencies than chilling which will start dormant trees and shrubs into growth even in our own latitude?" It must be said in reply that there are. And it is worth while to consider some of these causes, for not only are they of interest in themselves but also, instead of weakening the hypothesis here presented, they serve to strengthen and confirm it.

The pruning of a long-dormant plant

will often start it into growth. Girdling produces a similar result. Notching the stem does the same. Rubbing the stem also starts the plant into growth. In all these examples of the stimulation of growth by injury it is conceived that the enzyme, or soluble ferment, which is found in all plants and which transforms starch into sugar, is brought into contact with the starch as a direct result of the breaking and straining of the cells, thus causing sugar to be formed and growth to begin. Tropical plants probably have various methods of coming out of their dormancy, and there is every reason to expect that some of them will be found to accomplish this act in the same way as our long dormant greenhouse, by the weakening of their cell membranes. This is in effect substantially identical with chilling.

As a single example of the practical application of the principle of chilling, it may be stated that the scientists of the Department of Agriculture in efforts to domesticate the wild blueberry plant, have succeeded, through the medium of hybrids, in bringing these plants into highly productive bearing. They have made them fruit so luxuriously and abundantly that they brought returns to the growers at the rate of more than \$1,000 an acre. In a word, they changed the blueberry from a small wild fruit the size of a pea to a fruit almost the size of a Concord grape, and they have made its culture a profitable industry.

These things they would not have been able to do, however, unless they had first worked out the principle of chilling, an understanding of which was essential to their work of breeding and propagation.

Going still further, the scientists responsible for these improved varieties of blueberries have made them yield, in greenhouses, ripe blueberries in February and March, the large berries reaching a diameter of over three-quarters of an inch. At various times from midsummer to autumn the plants were placed in glass frames artificially chilled. After two or three months' chilling they were taken into a greenhouse and at once began growing and flowering, while similar plants that had not been through the chilling period continued dormant in the same greenhouse. This is additional proof of the fact that a period of chilling is a general requirement of northern plants.

### Vacuum Cleaner.

"What is the matter with that new salesman?"

"You mean the one that just now climbed up behind the dress goods shelves and hid?"

"The same."

"Well, he saw the woman come in that he waited on the other day. She ordered a vacuum cleaner and he sent her a bottle of liquid shampoo."—Retail Ledger, Philadelphia.

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Feel Better Than in  
Twenty Years---I Owe  
This Entirely to

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It has made a new man  
out of me. This experience, related by E. C. Bayne, contractor, of 124 South Honore St., Chicago, may be your experience also if

you take Tanlac, the world's most famous system builder. Feel fine, as nature intends you to feel. Get Tanlac today. At all good druggists.

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Nujol is a lubricant—not a medicine or laxative—so cannot gripe.

When you are constipated, there is not enough lubricant produced by your system to keep the food waste soft. Doctors prescribe Nujol because its action is as close to this natural lubricant. Try it today.

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## SLOW DEATH

Aches, pains, nervousness, difficulty in urinating, often mean serious disorders. The world's standard remedy for kidney, liver, bladder and uric acid troubles—

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bring quick relief and often ward off deadly diseases. Known as the national remedy of Holland for more than 200 years. All druggists, in three sizes. Look for the name Gold Medal on every box and accept no imitation.

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The Infant's and Children's Regulator

Children grow healthy and free from colic, diarrhoea, flatulency, constipation and other trouble if given it at teething time. Safe, pleasant—always brings remarkable and gratifying results.

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The Retort Discourteous. The Dub—Do you consider it sinful to play golf on Sunday? The Old-Timer—Mebbe it is. But don't let it worry you. What you play can hardly be classed as golf.

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25c and 75c Packages, Everywhere

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SAFE AND SANE  
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